UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,174	09/15/2003	John Santhoff	30287-111	2822

44279 7590 09/16/2005

PULSE-LINK, INC.
1969 KELLOGG AVENUE
CARLSBAD, CA 92008

EXAMINER	
JAGANNATHAN, MELANIE	
ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/663,174	SANTHOFF ET AL.	
	Examiner	Art Unit	
	Melanie Jagannathan	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- Examiner has considered amendment filed 6/27/2005.
- Claims 11-28 are currently pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 11-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Webster et al. US 6,754,195.

Regarding claim 11, the claimed first transceiver structured to communicate at a first data rate and second transceiver structured to communicate at a second data rate is disclosed by mixed signal devices (Figure 1, elements 103-109) communicating with each other at different or higher data rates from each other. Mixed signal devices (elements 103, 105) who communicate with each other at different or higher data rates than 802.11b rates can be configured with a standard mode to be able to communicate with devices (elements 107, 109) at any one or more of the standard 802.11b rates. See column 5, lines 49-67, column 6, lines 1-40, column 9, lines 20-58. Mixed signal device (elements 103, 105) contains a mixed signal receiver (element 201) comprising a

single carrier receiver (element 207) for analyzing preamble of incoming signal and processing incoming signal that is not a mixed mode packet and a multi-carrier receiver (element 209) for processing incoming mixed mode packet. A mixed mode packet has a header with mixed mode identifier and accommodates communication between the different mixed signal mode devices (elements 103-109) at different or higher data rates. See column 6, lines 44-67, column 7, lines 1-22.

Regarding claims 12-13, the claimed first data rate between about 1 Kbps to 5Mbps and second data rate is between 5Mbps to about 1Gbps is disclosed by Barker preamble (Figure 3, element 303) transmitted at 1 Mbps, a Barker header (element 305) transmitted at 1 or 2 Mbps and OFDM symbols (Figure 3, element 307) incorporating payload data transmitted at any selected data rate from among rates of 24, 36, 48, or 54 Mbps. See column 7, lines 23-32.

Regarding claims 14-15, the claimed first transceiver communicates at first data rate and second transceiver kept off until desired is disclosed by devices including single-carrier receiver (Figure 2, element 207) and multi-carrier receiver (Figure 2, element 209) where switch (element 205) initially provides received signal to single-carrier receiver and if header examination determines it is a mixed packet (as described above) the switch provides it to the multi-carrier receiver. See column 6, lines 44-67, column 9, lines 20-58.

Regarding claims 16-17,19, 23-24, the claimed at least two ultra-wideband communication devices, each device structured to transmit and receive using at least two data rates and master transceiver is disclosed by mixed signal devices (Figure 1,

elements 103-109), operating in 2.4 GHz band, communicating with each other at different or higher data rates from each other. Mixed signal devices (elements 103, 105) who communicate with each other at different or higher data rates than 802.11b rates can be configured with a standard mode to be able to communicate with devices (elements 107, 109) at any one or more of the standard 802.11b rates. See column 5, lines 49-67, column 6, lines 1-40, column 9, lines 20-58. Any one of these devices could take master role to communicate with two other devices at two different data rates. The claimed each device including a first transceiver to communicate at first data rate and second transceiver structured to communicate at a second data rate is disclosed by mixed signal device (element 103, 105) contains a mixed signal receiver (element 201) comprising a single carrier receiver (element 207) for analyzing preamble of incoming signal and processing incoming signal that is not a mixed mode packet and a multi-carrier receiver (element 209) for processing incoming mixed mode packet. A mixed mode packet has a header with mixed mode identifier and accommodates communication between the different mixed signal mode devices (elements 103-109) at different or higher data rates. See column 6, lines 44-67, column 7, lines 1-22.

Regarding claims 18, 24, 27, the claimed determining a communication data rate capability of devices, device transmit request to communicate using only one of data rates is disclosed by Webster et al. incorporating by reference dual packet configuration of U.S. packet application 09/586,571. The dual mode packet configuration allows 802.11b in 2.4 GHz band to coexist with devices communicating at different or greater

rates afforded by OFDM. An OFDM mode bit in the header is used by target device for indication of OFDM mode use by another device. See column 1, lines 52-64.

Regarding claim 20, the claimed time duration may ranged form about ten picoseconds to about one millisecond is disclosed by mixed signal packet has sample rate 20 MHz which inversely would amount to around one millisecond for time duration. See column 7, lines 23-37.

Regarding claim 21, the claimed OFDM signals is disclosed by devices transmitting OFDM symbols (Figure 3, element 307) incorporating payload data transmitted at any selected data rate from among rates of 24, 36, 48, or 54 Mbps. See column 7, lines 23-32.

Regarding claim 22, the claimed low data rate transceiver communicates and high data rate transceiver is disclosed by devices including single-carrier receiver (Figure 2, element 207) and multi-carrier receiver (Figure 2, element 209) where switch (element 205) initially provides received signal to single-carrier receiver and if header examination determines it is a mixed packet (as described above) the switch provides it to the multi-carrier receiver. See column 6, lines 44-67, column 9, lines 20-58.

Regarding claim 25, the claimed master transceiver transmits beacon signal containing geographic location information is disclosed by mixed packet signal including preamble with power and timing information associated with the multi-path medium which the signal was propagated from the WLAN device. See column 6, lines 44-55, column 7, lines 10-22.

Regarding claim 26, the claimed two data rates selected from group consisting of 1 Kbps, 5 Mbps, 25 Mbps, 50 Mbps, 100 Mbps, 200 Mbps, 400 Mbps, 480 Mbps, 500 Mbps and 1 Gbps is disclosed by Barker preamble (Figure 3, element 303) transmitted at 1 Mbps, a Barker header (element 305) transmitted at 1 or 2 Mbps and OFDM symbols (Figure 3, element 307) incorporating payload data transmitted at any selected data rate from among rates of 24, 36, 48, or 54 Mbps. See column 7, lines 23-32.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Webster et al. US 6,754,195.

Regarding claim 28, Webster et al. discloses all of the limitations of the claim except for master transceiver transmitting shut-down signal to ultra-wideband device. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify Webster et al.'s WLAN devices transmit shut-down signal as part of mixed signal packet. One of ordinary skill in the art would be motivated to do this to conserve power of device.

Response to Arguments

5. Applicant's arguments filed 6/27/2005 have been fully considered but they are not persuasive. Examiner appreciates detailed description of prior art.

Applicant argues Webster et al. does not disclose an ultra-wideband communication device comprising a first transceiver to communicate at first data rate and second transceiver to communicate at second data rate.

Examiner respectfully disagrees. Examiner believes above claimed limitation is taught in Webster et al. by mixed signal devices (elements 103, 105) communicating at different or higher data rates than the standard 802.11b rates communicated between mixed signal devices (elements 107, 109). In order to allow the higher data rate devices (elements 103, 105) to communicate with standard 802.11b rate devices they are configured to include a transmitter to transmit a mixed waveform configuration including Barker preamble (Figure 3, element 303) transmitted at 1 Mbps, a Barker header

(element 305) transmitted at 1 or 2 Mbps and OFDM symbols (Figure 3, element 307) incorporating payload data transmitted at any selected data rate from among rates of 24, 36, 48, or 54 Mbps. See Figure 16, column 1-40, column 7, lines 23-32, column 9, lines 43-58. The devices (elements 103, 105) also include a mixed signal receiver (element 201) comprising a single carrier receiver (element 207) for analyzing preamble of incoming signal and processing incoming signal that is not a mixed mode packet and a multi-carrier receiver (element 209) for processing incoming mixed mode packet. A mixed mode packet has a header with mixed mode identifier and accommodates communication between the different mixed signal mode devices (elements 103-109) at different or higher data rates. See column 6, lines 44-67, column 7, lines 1-22.

Therefore, rejection is maintained.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 571-272-3163. The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
9/14/05

FRANK DUONG
PRIMARY EXAMINER